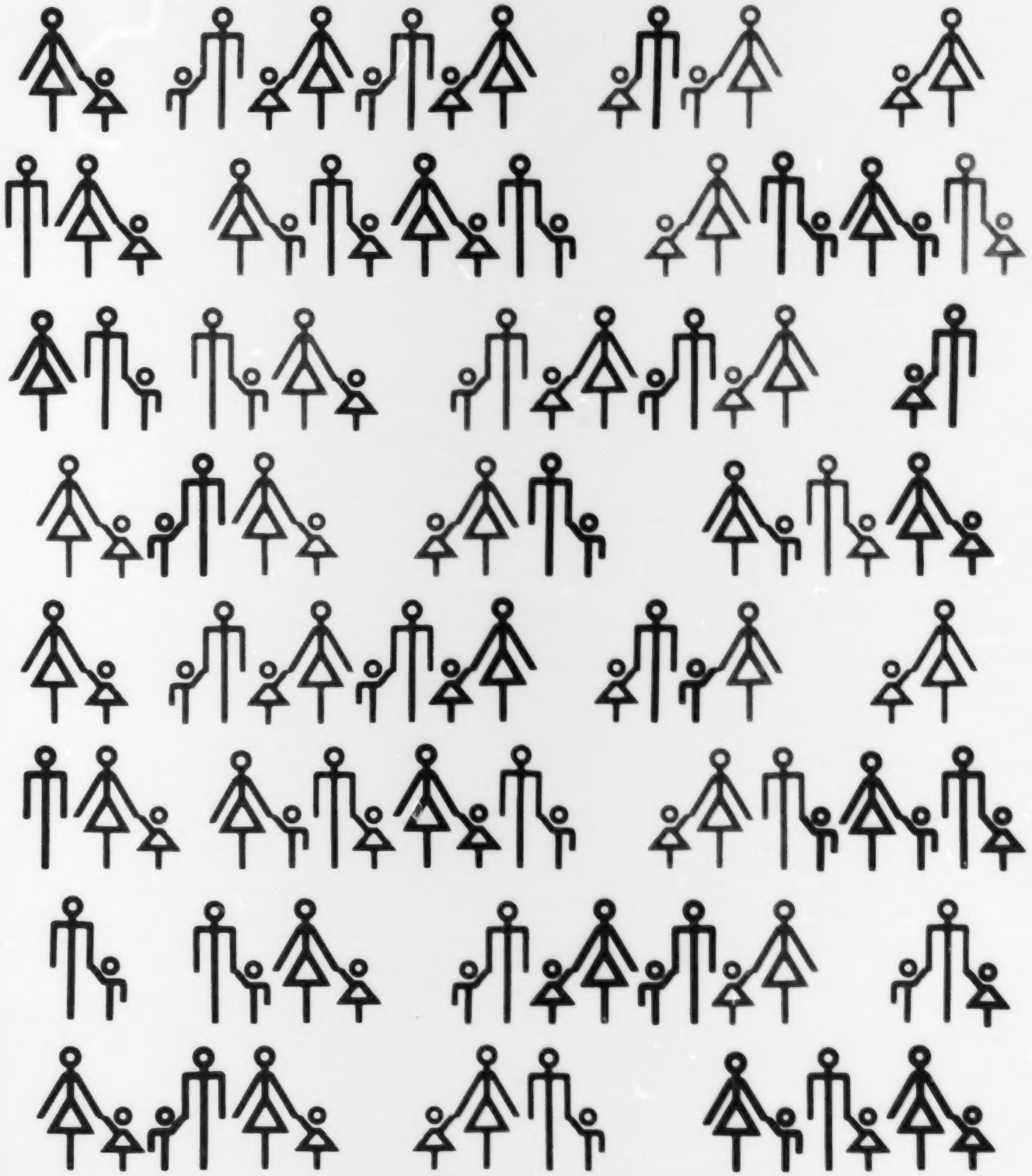
Ontario Child Health Study:
Abstracts of Research Reports and Literature Reviews



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ONTARIO CHILD HEALTH STUDY:
Abstracts of Research Reports and Literature Reviews

Ministry of Community and Social Services
Children's Services Branch
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INTRODUCTION

This publication contains abstracts of research reports* based on the results of the Ontario Child Health Study (OCHS), a community survey conducted in 1983 by the Child Epidemiology Unit of the Department of Psychiatry of McMaster University and the Child and Family Centre of Chedoke-McMaster Hospitals, in cooperation with the Special Surveys Division of Statistics Canada. It also contains a list of literature reviews produced through the Child Epidemiology Unit. The OCHS was funded by the Ontario Ministry of Community and Social Services with provincial lottery funds as a primary prevention** initiative undertaken in the hope that the data would be useful in planning and establishing primary prevention services. Additional funds for purposes of analysis were provided by the Ministry of Community and Social Services and support for sub-studies was also provided by the National Health Research and Development Program.

This document was produced in order to maximize the distribution of information from the OCHS, to increase awareness of the quantity and range of information produced and to make information on special topics more accessible. It is meant to serve as a companion piece to the Ontario Child Health Study: Summary of Initial Findings (1986), which was based on the first five research reports (Abstracts I to V). Seven of the twenty-five OCHS research reports abstracted in this document have been published in academic journals, and five others are in press. A second summary of findings is being written currently, and should be available for distribution in early 1988. A follow-up study, "Four Years Later," of the original survey population is underway with funding from the Ministry of Community and Social Services and the Ministry of Health, and these findings will also be made available.

In addition to conducting the OCHS survey, the Child Epidemiology Unit was asked to review critically the literature on the primary prevention of children's emotional and behavioural problems with a view to making recommendations to government about clinical and research priorities in this area. Experts in the field were commissioned to carry out these reviews, which are listed at the end of this document. Eight of the twelve literature reviews have been published in academic journals, and four others are in press.

* As of September, 1987

** Primary prevention aims at reducing the incidence of disorders, disabilities and dysfunctions in a population.

The goals of the OCHS were to gather sound epidemiologic data on the prevalence of emotional and behavioural problems among the province's children, to examine rates and patterns of service utilization and to identify risk factors associated with childhood disorder.

The target population consisted of all children living in Ontario who were born between January 1, 1966 and January 1, 1979. Three groups of children, representing 3.3 percent of four to sixteen year-olds, were excluded: those living on Indian reserves, in institutions, and in dwellings constructed after June 1, 1981 (Census Day). A stratified random sample of households was selected from the 1981 census file. The major strata were the four Ministry of Community and Social Services administrative regions, with each region further subdivided into urban (population higher than 25,000), small urban (3,000 to 25,000) and rural (less than 3,000) communities. The sample size represented the minimum number of households required in each region to ensure 95% confidence that the estimates of prevalence in the sample lay within 4% of the values for the population. Ninety-one percent of the households selected agreed to participate in the study, yielding a total sample of 3294 children.

Four instruments were used in the survey to gather information about risk factors (child's early history, parental and family characteristics and demographics), health status (childhood psychiatric disorders, chronic physical illness and functional limitations) and consequences (utilization of services and child impairments):

- Household record cards were used to screen households for eligible children;

- interviewer administered questionnaires were used to obtain information about the child's health, use of medical and other resources and demographic characteristics;

- self-administered questionnaires were completed by parents to obtain information on family matters, such as discipline practices and physical violence; and

- self-report checklists were completed by parents, teachers of children aged four to eleven years, and by youths aged 12 to 16 years to measure the disorders being studied.

Four childhood disorders (conduct disorder, attention deficit disorder with hyperactivity, emotional disorder and somatization) were chosen for study because of their perceived frequency, adverse effect on life quality, and cost to society. Specific rarer disorders (e.g., infantile autism) were not included because they occur too infrequently in the general population for

efficient and reliable identification using available community survey techniques.

A separate study ensured the validity of the checklist measures of disorder by comparison with psychiatrists' diagnoses. To determine whether each disorder was "present" or "absent", the researchers set a cut-off mark for the checklist measures that best matched psychiatrists' diagnoses of disorder in a sub-sample of the survey children.

The abstracts and literature reviews listed in this booklet are organized under subheadings (Methodology, Measurement and Preliminary Results; Conduct Disorder and Risk-Taking Behaviour; Attention Deficit Disorder; Neurotic or Emotional Disorder, Depression and Suicidal Behaviour; Chronic Illness and Medical Care; Family Functioning; Other Correlates, Risk Factors and Protective Factors; and Literature Reviews) and are numbered (Roman numerals). The title of the report, the year it was written, the author(s), the publication status of the report (if available), and the body of the abstract are presented. Abstracts are not provided for the literature reviews, however the title, author(s) and publication status are listed. A subject index, listing key words by page number, is also provided to assist readers.

Copies of the papers listed in this publication are available from the authors at the:

Child Epidemiology Unit
Chedoke Division
Chedoke-McMaster Hospitals
Box 2000, Station A
Hamilton, Ontario L8N 3Z5

through the Ministry of Community and Social Services Library, or by contacting:

Peter Murchison, Coordinator

Prevention, Children's Services Branch
Ministry of Community and Social Services
3rd Floor, Hepburn Block, Queen's Park
Toronto, Ontario M7A 1E9

Additional copies of this document may also be obtained from the Children's Services Branch Prevention Unit, as listed above.

LIST OF AUTHORS

Child Epidemiology Unit, Department of Psychiatry, McMaster University and the Child and Family Centre of Chedoke-McMaster Hospitals, Hamilton, Ontario

David R. Offord, M.D., Director
Michael H. Boyle, M.Sc., Research Associate

Robert J. Alder, M.A.
John A. Byles, D.S.W. (deceased)
Carolyn Byrne, R.N., M.Sc.
David T. Cadman, M.D.
Shayna Chamitoff, M.D.
John W. Crawford, M.D.
Jan E. Fleming, M.D.
Paul S. Links, M.D.
Jane E. McNamee, M.A.
Heather Munroe Blum, Ph.D.
Peter Pettingill, M.S.W.
Naomi I. Rae-Grant, M.D.
Peter Rosenbaum, M.D.
Paul E. Stenerson, B.Sc.
Peter Szatmari, M.D.
Helen Thomas, R.N., M.Sc.
Christel A. Woodward, Ph.D.

Special Surveys Division, Statistics Canada

Gary P. Catlin, B.A., Project Manager
Hank G. Hofmann, M.Sc., Senior Methodologist

Additional Contributors to Literature Reviews

Morton Beiser, M.D., Division of Social and Cultural Psychiatry, University of British Columbia
Joyce S. Cohen, C.S.W., Faculty of Social Work, University of Toronto
Laurence Jerome, M.D., M.B.Ch.B., M.Sc., M.R.C.Psych., Madame Vanier Children's Services, Child and Adolescent Centre, Victoria Hospital and University of Western Ontario
Russell T. Joffe, M.D., Department of Psychiatry, St. Michael's Hospital and the University of Toronto
Beverly R. Jones, M.A., Jones & Jones, Research Associates, Hershey, Pennsylvania
Victor Lotter, Ph.D., Department of Psychology, University of Guelph

Spero M. Manson, Ph.D., Department of Psychiatry, Oregon Health Sciences University
Quentin Rae-Grant, M.D., Toronto Hospital for Sick Children
Bonnie E. Robson, M.D., C.M. Hincks Treatment Centre, University of Toronto
Brent G. Waters, M.D., Royal Alexandra Hospital for Children, Sydney, Australia
Anne Westhues, D.S.W., Faculty of Social Work, Wilfrid Laurier University
Leonard White, Ph.D., Laboratory of Electrophysiology, Division of Diagnostics, Long Island Research Institute, SUNY at Stony Brook, New York

A. METHODOLOGY, MEASUREMENT AND PRELIMINARY RESULTS

I

ONTARIO CHILD HEALTH STUDY: METHODOLOGY (1987)

Michael H. Boyle, David R. Offord, Hank G. Hofmann, Gary P. Catlin, John A. Byles, David T. Cadman, John W. Crawford, Paul S. Links, Naomi I. Rae-Grant and Peter Szatmari, Archives of General Psychiatry, 44:826-831.

The methodology of the Ontario Child Health Study (OCHS), a community survey to determine the prevalence of emotional and behavioural disorders among children 4 to 16 years of age in the province of Ontario, Canada, is described. The topics discussed include the objectives of the survey, sampling methods, survey design, a description of the data collected and instrumentation. Among 2052 households with eligible children, 1869 (91%) participated in the survey. The results can be used to help plan the future allocation of mental health resources in the province.

II

ONTARIO CHILD HEALTH STUDY: MEASUREMENT OF DISORDER (1987)

Michael H. Boyle, John A. Byles, David R. Offord, John W. Crawford, Peter Szatmari, Naomi I. Rae-Grant Paul S. Links, David T. Cadman, and Paul E. Stenerson.

The development and evaluation of four scales used in the Ontario Child Health Study to measure conduct disorder, hyperactivity, emotional disorder and somatization in general population aged 4 to 16 years are described. The scales, comprised of problem behaviours (items) added together to form a score, were derived from parent, teacher and adolescent checklist responses. These scales, formed into binary ratings at different cutoff points, were compared to psychiatrists' diagnoses to identify optimal thresholds for estimating prevalence and analyzing the strength of association with suspected risk factors. Evaluation of the binary ratings derived from the scales indicate that they are able to replicate child psychiatrists' diagnoses of conduct disorder and hyperactivity but are less capable of replicating diagnoses of emotional disorder and somatization.

III

ONTARIO CHILD HEALTH STUDY: SIX-MONTH PREVALENCE OF DISORDER AND RATES OF SERVICE UTILIZATION (1987)

David R. Offord, Michael H. Boyle, Peter Szatmari, Naomi I. Rae-Grant, Paul S. Links, David T. Cadman, John A. Byles, John W. Crawford, Heather Munroe Blum, Carolyn Byrne, Helen Thomas, and Christel A. Woodward, Archives of General Psychiatry, 44:832-836.

Data on the prevalence of four child psychiatric disorders (conduct disorder, hyperactivity, emotional disorder and somatization) and patterns of service utilization for mental health, social services, ambulatory medical care and special education over the past six months, by different regions of Ontario, urban/rural residence and age and sex groupings are presented. Among children 4 to 16 years old, the overall six-month prevalence rate of one or more disorders was 18.1%. The prevalence rate of "one or more" disorders, and specifically hyperactivity, were significantly higher in urban compared to rural areas. The utilization data indicated that children with psychiatric disorders compared to children without disorders were almost four times more likely to receive mental health or social services in the previous six-month period. Over 50% of the children in the province had ambulatory medical care (doctor's offices, emergency rooms and hospital outpatient departments) in the last six months. Over 15% of the children in the province had received special education services at some time thus far in their school careers. The implications of these findings, especially for the delivery of mental health services, are discussed.

IV

ONTARIO CHILD HEALTH STUDY: CORRELATES OF DISORDER (1986)

David R. Offord, Michael H. Boyle, Peter Szatmari, Naomi I. Rae-Grant, Paul S. Links, David T. Cadman, John A. Byles, John W. Crawford, Heather Munroe Blum, Carolyn Byrne, Helen Thomas, and Christel A. Woodward.

Data from the OCHS on the correlates of child psychiatric disorder are described. Univariate analysis indicated that the children of parents on welfare were at markedly increased risk for psychiatric disorder, as were children with chronic medical illness or with chronic functional limitations. Externalizing and internalizing disorders did not tend to have a distinct pattern of correlates. Multivariate analyses revealed that family problems and children's chronic health problems both had strong independent associations with psychiatric disorder. In contrast, a composite measure of low socioeconomic status and large sibship were not significantly independently related to disorder. These and other results are discussed and the findings interpreted in the light of previous studies.

V

ONTARIO CHILD HEALTH STUDY: CORRELATES OF UTILIZATION (1986)

Christel A. Woodward, Michael H. Boyle, David R. Offord, Paul S. Links, David T. Cadman, John A. Byles, Naomi I. Rae-Grant, Peter Szatmari, John W. Crawford, Heather Munroe Blum, Carolyn Byrne, and Helen Thomas.

Data on the correlates of utilization of three human service delivery systems (mental health and social services, ambulatory medical care and special education) are presented. Different groups of descriptors appear to influence utilization by children of each of the human service delivery systems studied. The parents' acknowledgement that need exists is a good predictor of concurrent utilization in the mental health and social services and ambulatory medical care delivery systems. Children with early developmental problems are more likely to receive special education services. Children living in urban areas are more likely to use ambulatory medical care and special education services. Low socioeconomic level does not make an independent contribution to predicting the level of use of any of the three delivery systems. These and other results are related to the existing literature and the implications discussed.

VI

PROBLEMS IN SETTING UP AND EXECUTING LARGE-SCALE PSYCHIATRIC EPIDEMIOLOGICAL STUDIES (1986)

David R. Offord and Michael H. Boyle, Psychiatric Developments, 3:257-272.

This paper focuses on problems that can be encounter in conceptualizing, executing and writing up large-scale psychiatric epidemiological studies. It makes no attempt to cover fundamental issues of design and analysis, rather it centers on problems associated with projects of considerable size. In the conceptual area, it discusses the prerequisites to be considered before deciding to launch such a study. It notes the administrative and scientific uses of epidemiological studies and considers the strengths and weaknesses of large-scale studies to address those concerns. issues in carrying out such studies are discussed including decisions about study design, sampling method and instrumentation. All are dependent on the central purpose of the study but trade-offs between feasibility and scientific rigour are always present. Data collection and analysis problems highlighted in large-scale studies are examined. They include the difficulty, in the former, of adequately motivating and supervising field personnel and, in the latter, of dealing with problems that accompany missing data and complicated sampling strategies. Potential problems in data access and use and writing up the results are seen as arising from the presence of a large investigative team with diverse interests. Lastly, the comparative worth of these studies is considered.

B. CONDUCT DISORDER AND RISK-TAKING BEHAVIOUR

VII

PREVALENCE AND SOCIODEMOGRAPHIC CORRELATES OF CONDUCT DISORDER (1986)

David R. Offord, Robert J. Alder and Michael H. Boyle, American Journal of Social Psychiatry, VI(4):272-278.

Data on conduct disorder or antisocial behaviour disorder from the OCHS are presented. Information on individual child symptoms indicated that youth compared to parents consistently reported higher frequencies of antisocial symptoms. The overall rate of conduct disorder in Ontario children 4 to 16 years was 5.5%. Boys had higher rates than girls and rural girls, 4 to 11, had a particularly low rate. The overwhelming majority of conduct disordered children were identified by only one source, for example, parents or teachers and seldom by both sources. Well over 50% of children with this disorder had at least one other psychiatric diagnosis. Among the sociodemographic correlates, being on welfare and living in subsidized housing were most strongly related to conduct disorder. These and other results are compared with the literature and the implications are discussed.

VIII

THE EPIDEMIOLOGY OF ANTISOCIAL BEHAVIOUR IN EARLY ADOLESCENTS, AGED 12 TO 14 (1987)

David R. Offord and Michael H. Boyle, in Early Adolescent Transitions, M. D. Levine and E. R. McAnarney (Ed.), in press.

The prevalence of antisocial symptoms and the prevalence, distribution, selected correlates and patterns of service utilization of conduct disorder among early adolescents, 12 to 14 years of age are described using data from the OCHS. Antisocial symptoms were more frequently reported by the youths themselves than by their parents and generally more commonly reported for boys than girls. The prevalence of conduct disorder in this age group was 5.6% with the rate in boys (9.1%) being almost four times the rate in girls (2.3%). The rate did not vary significantly by urban/rural status. Approximately 9 of 10 cases of conduct disorder were identified by one source alone, either the parent or the youth, but not by both. Almost half of the young adolescents with conduct disorder had another psychiatric

disorder. The sociodemographic correlate most strongly related to conduct disorder was welfare status. A chronic medical condition in the young adolescent was also strongly and significantly related to conduct disorder. The utilization data revealed that while young adolescents with conduct disorder were almost three times more likely to have received specialized mental health or social services within the last six months, almost 5 out of six of these youth did not receive these specialized services. The results are compared with the existing literature and the implications are discussed.

IX

SMOKING, DRINKING AND USE OF ILLICIT DRUGS AMONG ADOLESCENTS IN ONTARIO: PREVALENCE, PATTERNS OF USE AND SOCIODEMOGRAPHIC CORRELATES (1986)

Michael H. Boyle and David R. Offord, Canadian Medical Association Journal, 135:1113-1121.

Data from the OCHS were used to provide estimates of the prevalence, patterns and sociodemographic correlates of the use of tobacco, alcohol and illicit drugs (substance use) among adolescents aged 12 to 16 years. The prevalence rates of all categories of substance use, except use of inhalants, increased with age. Among children aged 14 to 16 years the rates for girls were higher than those for boys for all categories of substance use except use of "other, undefined drugs". The prevalence rates of substance use tended to be higher in small urban areas except for use of marijuana (more prevalent in large urban areas) and inhalants (more prevalent in rural areas). The strongest evidence of clustering of substance use within families was found for smoking. Children who used less prevalent drugs (e.g., "hard" drugs) also tended to use the more prevalent ones (e.g., marijuana, tobacco and alcohol). Associations between substance use and low socioeconomic status suggested a positive relation with smoking and a negative relation with use of alcohol. The findings highlight the need for preventive programs aimed at specific subgroups in the adolescent population.

C. ATTENTION DEFICIT DISORDER

X

ONTARIO CHILD HEALTH STUDY: PREVALENCE OF ATTENTION DEFICIT DISORDERS WITH HYPERACTIVITY (1986)

Peter Szatmari, David R. Offord and Michael H. Boyle.

Data from the OCHS on the prevalence of attention deficit disorder with hyperactivity (ADDH) are presented. The overall prevalence of ADDH was 9.0% in boys and 3.3% in girls. ADDH was the most common psychiatric disorder in boys 4 to 11. For example, 65.7% of boys 4 to 11 with any disorder had ADDH. There were no significant differences in the prevalence of ADDH by age or urban-rural status, but the disorder was significantly more common in boys than in girls. Attention deficit without hyperactivity was relatively uncommon, occurring in only 1.0% to 1.4% of children. Pervasive ADDH (i.e., ADDH that occurs across situations, as opposed to situational ADDH, which occurs in only one setting, home or school, or is only reported by the youth) was even more uncommon. There were no cases of pervasive ADDH in girls, and it was present in only 1.5% of boys 4 to 11. The majority of ADDH children, with the exception of girls 4 to 11, had at least one other psychiatric diagnosis. Roughly 40% of all ADDH children also had a conduct disorder and 50% of ADDH girls 12 to 16 also had an emotional disorder. There are at least three important clinical implications of these findings. First, clinicians have assumed that ADDH is rare in girls and virtually disappears in adolescence. In contrast, these data suggest that ADDH is still relatively common and that clinicians should be encouraged to make the diagnosis in girls and adolescents. Second, targeting pervasive ADDH for intervention seems justified in terms of using finite resources to treat the most severe cases. Third, clinicians have been reluctant to make multiple diagnoses on children, yet this finding is more the rule than the exception. Children with multiple diagnoses, i.e. ADDH and conduct disorder, may need a different intervention than those with only one disorder.

XI

CORRELATES AND PATTERNS OF SERVICE UTILIZATION OF CHILDREN WITH ATTENTION DEFICIT DISORDERS: FINDINGS FROM THE ONTARIO CHILD HEALTH STUDY (1986)

Peter Szatmari, David R. Offord and Michael H. Boyle.

Some of the correlates of attention deficit disorder with hyperactivity (ADDH) and the utilization of services by children with ADDH are described. There is considerable controversy in the literature about

whether the correlates of ADDH are primarily psychosocial or biological. The results of this study suggested that both developmental (clumsy, low birth weight, slow to talk, etc.) and psychosocial (welfare) risk factors are associated with this disorder, even when the presence of other disorders was controlled for. ADDH children, with or without other disorders, were also impaired in their relationships with others, their school performance, and competence in extracurricular activities compared to children with no disorder. These children were particularly vulnerable to fractures and accidental poisoning compared to non-ADDH children, but were not at increased risk for burns or head injuries. ADDH children utilized mental health and special education services more than non-ADDH children, however, only 17% of children with "pure ADDH" and 20% of children with ADDH plus another disorder were receiving mental health or social services. Although 60% of ADDH children had seen a physician within the last six months, only 5% were receiving stimulant medication for their disorder. Four clinical implications of the results are discussed: 1) Reducing the impact of psychosocial disadvantage on families may reduce the incidence of new cases of ADDH; 2) Reducing the harmful sequelae of the associated impairments of ADDH may be an effective management strategy; 3) Physicians may be missing an opportunity to help ADDH children by under-utilizing medication and other effective management strategies; and 4) Parents of ADDH children should be made aware of the risks to their children of accidental poisoning and fractures.

XII

ISSUES IN ASSESSING THE TAXONOMIC VALIDITY OF CHILD PSYCHIATRIC DIAGNOSES: FINDINGS FROM THE ONTARIO CHILD HEALTH STUDY (1986)

Peter Szatmari (D.M.E. Thesis).

The main objective of this thesis is to investigate the diagnostic validity of attention deficit disorders with hyperactivity (ADDH). A number of recent studies have suggested that most children with ADDH also have a conduct disorder and that the psychosocial correlates of the two disorders are identical. The suggestion has been, therefore, that ADDH really represents a mild form of conduct disorder. This paper compares children with pure (i.e., no other disorder) ADDH and pure conduct disorder on a number of psychosocial variables, controlling for the possible effects of age, sex, and severity of disorder. Poverty and overcrowding were reported significantly more often for conduct disordered children than for children with ADDH. Children with pure conduct disorders were older and were more likely to live in families with one or more demographic risk factors (poverty, unemployment, overcrowding) than children with ADDH. The results suggest that ADDH is a valid disorder and that it is associated with less psychosocial disadvantage than conduct disorder. The issue of whether the differences in psychosocial correlates will also predict differences in natural history and response to treatment remains unresolved.

D. NEUROTIC OR EMOTIONAL DISORDERS, DEPRESSION AND SUICIDAL BEHAVIOUR

XIII

THE PREVALENCE OF NEUROTIC DISORDERS IN CHILDREN (1986)

Paul S. Links, Michael H. Boyle and David R. Offord.

Data from the OCHS on the prevalence of individual symptoms, the variation of prevalence rates as a function of demographic factors, and the rates of service utilization for children with emotional or neurotic disorders are reported. The study supports previous findings of a high prevalence of emotional or neurotic symptoms as reported by parents and teachers, and that adolescents report a greater frequency of emotional or neurotic symptoms than parents. For example, 16% of girls aged 12 to 16 years of age acknowledged "talks about killing self" while only 2.5% of parents reported this symptom as present. The finding that emotional disorder is rarely identified by more than one source is consistent with previous results. Rates of emotional disorder in preadolescent boys and girls were similar at approximately 10%, however, anxiety disorders were more prominent than depression in the preadolescent age group. The study also supports previous findings that a child with one disorder is at considerable risk to have an additional diagnosis. For example, 41.9% of adolescent children with emotional disorder or neurosis also met the criteria for somatization disorder. The data on utilization indicate that only a minority of children (1 in 5) with emotional disorder received mental health or social services in the last six months. However, overall, these children are more likely to receive services than children without emotional disorder.

XIV

ONTARIO CHILD HEALTH STUDY: PREVALENCE OF CHILDHOOD AND ADOLESCENT DEPRESSION IN THE COMMUNITY (1986)

Jan E. Fleming, David R. Offord and Michael H. Boyle.

Data from a cross-sectional community survey of childhood psychiatric disorders were used to provide estimates of DSM III symptomatology of major depressive disorder in children and adolescents. In 4 to 11 year olds the prevalence rate for major depression was 2.6% for both boys and girls and this increased to 6.9% for boys and 8.8% for girls 12 to 16 years old.

Parents, teachers and adolescents were used as data sources and there was little agreement among them as to the presence or absence of depressive symptoms. Sixty-two percent of depressed children were also suffering from another psychiatric disorder and only 12.2% of depressed children had used mental health or social services in the previous six months.

XV

ONTARIO CHILD HEALTH STUDY: SUICIDAL BEHAVIOUR IN YOUTH AGED 12 - 16 YEARS (1986)

Russell T. Joffe, David R. Offord and Michael H. Boyle.

This is a report on the prevalence and correlates of suicidal behaviour (i.e., suicidal ideation or suicidal attempt) in youth aged 12 to 16 years from the OCHS. Five to 10 percent of male and 10 to 20 percent of female youth had experienced suicidal ideation or had made a suicide attempt in the past six months. The difference in prevalence rates between boys and girls can be accounted for by the high prevalence rate of suicidal behaviour in girls aged 14 to 16 years. Suicidal behaviour in youth appeared to be related to psychiatric disorder in general (but not to specific diagnoses) as well as to several measures of parental problems (e.g., parent criminality, excessive use of alcohol and having been treated for nerves) and family dysfunction. The implications of these findings are discussed.

E. CHRONIC ILLNESS AND MEDICAL CARE

XVI

CHRONIC ILLNESS AND FUNCTIONAL LIMITATION IN ONTARIO CHILDREN: FINDINGS OF THE ONTARIO CHILD HEALTH STUDY (1986)

David Cadman, Michael H. Boyle, David R. Offord, Peter Szatmari, Naomi I. Rae-Grant, John Crawford and John Byles, Canadian Medical Association Journal, 135:761-767.

The primary purpose of the OCHS was to determine the prevalence and distribution of mental health problems in Ontario children aged 4 to 16 years and their families, but it also allowed an estimate of the prevalence of other significant medical conditions (e.g., cerebral palsy, blindness, asthma) and provided an overview of these children's use of health care, education and social services. Limitation of function without chronic illness or medical condition was reported in 1.9%, the converse in 14.0%, and a chronic illness with limitation of function in 3.7%. When the three groups are considered together, 19.6% of Ontario children had a chronic health problem. Children of lower socioeconomic status were much more likely to have chronic health problems. Overall, children with chronic health problems were more likely to use physician, special education, social and mental health services. These findings have implications for those who provide services for children, plan community programs or train professionals in caring for children.

XVII

CHRONIC ILLNESS, DISABILITY, AND MENTAL AND SOCIAL WELL-BEING: FINDINGS OF THE ONTARIO CHILD HEALTH STUDY (1987)

David Cadman, Michael Boyle, Peter Szatmari and David R. Offord, Pediatrics, 79:805-813.

Chronic childhood illness, disability and psychosocial problems are receiving major attention in current pediatric literature. Much of the evidence which associates chronic physical problems and mental health and adjustment problems has come from clinic-based studies, and is often inconsistent in its conclusions. This paper is a report of the findings of the OCHS concerning the relationship of psychiatric disorder and social adjustment problems among children with chronic illness, medical conditions, and long-term disability in contrast to children free of chronic physical health problems. Age and sex adjusted risks of psychiatric disorders and social problems for

children with chronic illness or disabilities, compared to healthy peers, were calculated. Children with both chronic illness and associated disability were at greater than 3-fold risk of psychiatric disorders, and considerable risk of social adjustment problems. Children with chronic medical conditions, but no disability were at considerably less risk: about a 2-fold increase in psychiatric disorders, but little increased risk of social adjustment problems was observed. A relative under-use of specialized mental health services by children who might benefit, supports the opinion that all physicians in the community who care for children with chronic health problems should become skilled in the recognition of existing or incipient mental health and social problems, and familiar with preventive and treatment approaches which may lessen the excessive burden of psychosocial problems among children with chronic ill-health.

XVIII

ONTARIO CHILD HEALTH STUDY: PATTERNS OF AMBULATORY MEDICAL CARE UTILIZATION AND THEIR CORRELATES (1987)

Christel A. Woodward, Michael H. Boyle, David R. Offord, David T. Cadman, Paul S. Links, Heather Munroe-Blum, Carolyn Byrne and Helen Thomas.

Data on the frequency and correlates of use of ambulatory medical care (AMC)* services during a 6-month period are reported. Patterns of use AMC are described for three settings: doctor's offices, emergency rooms, and hospital outpatient departments. A group of children who are frequent users of AMC (defined as using more than 2 services in a 6-month period) is identified who consumed nearly two-thirds of all services. Two regression equations are presented, one predicting use/nonuse of AMC and the other predicting the total number of visits to AMC. The major determinant of both AMC use and frequency of use was the child's physical health status as perceived by the parent. Younger child, urban area of residence, the number of chronic medical problems of the child, and higher level of maternal education also contributed to the explanation of use versus nonuse. High AMC users, as contrasted with infrequent users, were more likely to be described as having mental health problems, have parents who had been treated for "nerves" and/or to have chronic functional limitations. However, only a small proportion of the variance in use/nonuse and amount of use was explained.

* Doctor's offices, emergency rooms and hospital outpatient departments

F. FAMILY FUNCTIONING

XIX

THE GENERAL FUNCTIONING SCALE OF THE FAMILY ASSESSMENT DEVICE: RELIABILITY AND VALIDITY (1987)

John A Byles and Carolyn Byrne. Family Process, in press.

The "family" has long been considered part of the "cause" of emotional/behavioural disturbance in children. Parental alcoholism, criminality, psychiatric disturbance, marital conflict, and patterns of child-rearing are among the more frequently cited "causes" of childhood disorder in the literature. The OCHS included a measure of "family functioning" among its family-related variables. Family functioning refers to the way in which families work together on tasks essential to their viability as social systems. It was measured by the 12-item General Functioning (GF) sub-scale of the McMaster Family Assessment Device (FAD). While the psychometric properties (reliability and validity) of the FAD have been tested, no independent assessment has been made of the GF sub-scale, nor has the GF sub-scale been used previously in research. Thus, the confidence that could be placed in GF sub-scale scores, particularly when used in sophisticated statistical analyses, was unknown. The first step in analyzing data relating to families in the OCHS sample then, was to assess the reliability and validity of this GF measure of family functioning. Reliability (i.e., internal consistency of items) was measured by Cronbach's alpha and split-half correlation. Validity was assessed by hypothesizing the relationships expected between the GF scores and other family variables included in the OCHS data set. The results indicated very good reliability (alpha=.86 and split-half correlation=.83). All hypotheses of validity were supported. The GF scale was significantly associated, in the expected directions, with parental criminality, alcohol abuse, psychiatric problems, violence, marital disharmony and general mental health. As hypothesized, the GF scale was not associated with family size, physical health problems of parents and urban vs. rural residence. The GF scores were weakly associated with two variables considered as intervening between family dysfunction and child psychiatric disorders, namely, family structure (two parents vs. one parent families) and income. As a measure of family functioning the GF sub-scale of the FAD appears to meet the requirements of reliability and validity for inclusion in data analyses. Its brevity and ease of administration recommend it for further use in survey research where only a global assessment of family functioning on a continuum from "very healthy" to "pathological" is required.

XX

FAMILY FUNCTIONING AND EMOTIONAL AND EMOTIONAL/ BEHAVIOURAL PROBLEMS IN CHILDREN (1986)

John A. Byles, Carolyn Byrne, David R. Offord and Michael H. Boyle.

The interrelationships between family functioning, other family-related variables (including parent characteristics and sociodemographic attributes), and psychiatric disorders of children are examined in this paper. The unit of analysis is households, rather than individual children, and the disorders of interest are combined into the categories "externalizing" (conduct disorder and/or hyperactivity) and "internalizing" (emotional disorder and/or somatization). The strength of association between disorder and correlates is expressed as an odds ratio. Family functioning, as measured by the GF scale of the McMaster Family Assessment Device, demonstrated the strongest overall association with both types of childhood disorder. Other variables associated significantly (using logistic regression analysis) with "any" disorder were: urban residence, psychiatric disturbance or criminality of a parent, and distressful life events affecting the family. The findings support the view that treatment strategies should consider the entire family and not just the pathology of the individual child.

G. OTHER CORRELATES, RISK FACTORS AND PROTECTIVE FACTORS

XXI

PSYCHIATRIC DISORDER AND POOR SCHOOL PERFORMANCE AMONG WELFARE CHILDREN IN ONTARIO (1987)

David R. Offord, Michael H. Boyle and Beverly R. Jones. Canadian Journal of Psychiatry, in press.

Parental welfare status was found to be a marker for identifying a group of children with an increased prevalence of psychiatric disorder and poor school performance. The marker was particularly strong for psychiatric disorder in young boys and for poor school performance in young girls. For instance, the prevalence rates of psychiatric disorder in welfare and non-welfare boys, 6 to 11, were 40.0% and 13.9%, respectively; and the prevalence rates of poor school performance in welfare and non-welfare girls, 6 to 11, were 27.8% and 6.1%, respectively. The relationship of different measures of psychosocial disadvantage to these child deficits was examined. Multivariate analyses revealed that parental welfare status made an independent contribution to the prediction of psychiatric disorder and was a more powerful predictor of poor school performance in girls compared to boys. The implications of these and other results are discussed.

XXII

SINGLE-PARENT FAMILIES - CHILD PSYCHIATRIC DISORDER AND SCHOOL PERFORMANCE (1987)

Heather Munroe Blum, Michael H. Boyle and David R. Offord.

Data from the OCHS were used to examine the strength of association between single-parent family status and child psychiatric disorder and poor school performance. The bivariate results indicate that children of single-parent families are at a small (odds ratio 1.7) but statistically significant (p=0.000) increased risk for poor outcome. These same families, however, experience severe economic and social hardship. When variables indicative of hardship such as poverty and family dysfunction are controlled for in a multivariate analysis, the relationship between single-parent family status and childhood morbidity becomes statistically nonsignificant. The implications of these findings are discussed.

XXIII

THE SOCIAL SUPPORTS OF CHILDREN IN THE COMMUNITY: PART I (1986)

Paul S. Links, Michael H. Boyle, Heather Munroe Blum and David R. Offord.

The method for measuring the social supports of children in the OCHS is described. Eleven social support items were included in the survey, and the inter-correlations between the items suggested the development of four scales: support derived from friends, problems getting along, participation and competence. The lack of relationship between the scales provided support for treating them as separate aspects of social support. For children aged 12 to 16 years, two sources of data existed, the parent and the youth. The inter-correlations between sources are discussed as well as the relationship between demographic and family factors and the social support scales.

XXIV

RISK, PROTECTIVE FACTORS AND THE PREVALENCE OF BEHAVIOURAL AND EMOTIONAL DISORDERS IN CHILDREN AND ADOLESCENTS (1986)

Naomi I. Rae-Grant, B. Helen Thomas, David R. Offord and Michael H. Boyle.

Data from the OCHS on the presence of risk and protective factors, as well as the prevalence of childhood disorder, were used to determine which protective factors were significant predictors of the absence of disorder when the level of risk was controlled. Risk factors were defined as low socioeconomic status, the presence of family problems, and the presence of parental problems. These factors were selected because they appeared repeatedly in the literature and the item responses in the OCHS provided good data upon which to assess the presence or absence of each factor. Getting along with others, good academic performance, the presence of good friendships, competence, good participation in extracurricular activities and the presence of a confidant were considered to be candidates for protective factors for children and adolescents. The results indicate that, considering the risk and protective factors at one time, the presence of any one of the risk factors lead to an increased probability of disorder, while the presence of any one of the protective factors, except competence in extracurricular activities, leads to a decreased likelihood of disorder. The multivariate analyses reveal that when level of risk is controlled, protective factors have an independent effect in predicting disorder. For children, 4 to 11

and 12 to 16, getting along with others and good academic performance are significantly related to the absence of disorder. In addition, for children 4 to 11, good participation in extracurricular activities is a significant protective factor; and for youth 12 to 16, the presence of a confidant has a significant independent effect in predicting the absence of disorder. Implications of the findings are discussed, and include, the possible central roles of social skills and good academic performance in the prevention of child psychiatric disorders.

XXV

THE ONTARIO CHILD HEALTH STUDY: URBAN-RURAL DIFFERENCES IN THE PREVALENCE OF PSYCHIATRIC DISORDER AND UTILIZATION OF MENTAL HEALTH AND SCHOOL SERVICES (1984)

Shayna Chamitoff and John Byles, presented at the Canadian Psychiatric Association Meeting, Banff, Alberta.

Differences in the prevalence of psychiatric disorder and utilization of services between children living in urban and rural areas are examined using data from the OCHS. The results indicate that children in urban areas are about 1.5 times more likely to have a disorder than children in rural areas. When the disorders are examined individually, the only significant difference involves hyperactivity, which is 1.7 times more common among urban children aged 6 to 11 years old than among rural children. The other disorders, although tending to occur more frequently among urban children, show no significant urban/rural split. The results on patterns of service utilization indicate that urban children use more school services than rural children. Among children 12 to 16 years old with one or more psychiatric disorders significantly more of those living in urban versus rural area use school services. This difference is particularly marked for adolescents with an externalizing disorder (conduct disorder and/or hyperactivity). There was no difference between urban and rural children in the use of mental health services.

H. LITERATURE REVIEWS

XXVI ANNOTATION: PREVENTION OF BEHAVIOURAL AND EMOTIONAL DISORDERS IN CHILDREN (1987)

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XXVII CHILDHOOD PSYCHOSIS: A SELECTIVE REVIEW (1987)

Victor Lotter, Journal of Preventive Psychiatry, 3(2):105-116.

XXVIII SLEEP IN CHILDREN AND ADOLESCENTS: A REVIEW WITH IMPLICATIONS FOR PRIMARY PREVENTION (1987)

Leonard White, Journal of Preventive Psychiatry, 3(2):117-146.

XXIX PREVENTION OF EMOTIONAL, BEHAVIOURAL AND FAMILY PROBLEMS OF CHILDREN WITH CHRONIC MEDICAL ILLNESS (1987)

David Cadman, Peter Rosenbaum and Peter Pettingill, Journal of Preventive Psychiatry, 3(2):147-166.

XXX PREVENTION OF THE ADVERSE EFFECTS OF HOSPITALIZATION IN CHILDREN (1987)

Carolyn M. Byrne and David Cadman, Journal of Preventive Psychiatry, 3(2):167-190.

XXXI PSYCHIATRIC DISORDERS IN THE OFFSPRING OF PARENTS WITH AFFECTIVE DISORDER: A REVIEW (1987)

Brent G. Waters, Journal of Preventive Psychiatry, 3(2):191-206.

XXXII THE LACK OF SOCIAL SUPPORT AND PSYCHIATRIC MORBIDITY: IMPLICATIONS FOR PRIMARY PREVENTION (1987)

Paul S. Links, Journal of Preventive Psychiatry, 3(2):207-223.

XXXIII A REVIEW OF THE LITERATURE ON THE PREVENTION OF HARMFUL SEQUELAE OF ADOPTION (1987)

Laurence Jerome, Joyce S. Cohen and Anne Westhues, Journal of Preventive Psychiatry, in press.

XXXIV THE EFFECTS OF DIET ON CHILDREN'S MOOD AND BEHAVIOUR: A CRITICAL REVIEW OF THE LITERATURE (1987)

Jane E. McNamee and David R. Offord, Journal of Preventive Psychiatry, in press.

XXXV PREVENTION OF EMOTIONAL DISORDERS IN NORTH AMERICAN NATIVE CHILDREN (1987)

Morton Beiser and Spero M. Manson, Journal of Preventive Psychiatry, in press.

XXXVI DIVORCE: A MARKER FOR PREVENTION (1987)

Bonnie E. Robson and Quentin Rae-Grant, Journal of Preventive Psychiatry, in press.

XXXVII CONDUCT DISORDER: RISK FACTORS AND PREVENTION (1987)

David R. Offord, prepared for the Prevention Project, American Academy of Child Psychiatry.

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John Sweeney
Minister